### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-014461 Address: 333 Burma Road **Date Inspected:** 28-May-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Li Yang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Shrikant Utekar was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

TRIAL ASSEMBLY YARD

ULTRASONIC INSPECTION

**OBG SEGMENT 8CE** 

ABF Report No: UT-8E-049

This QA Inspector performed verification Ultrasonic Testing (UT) in accordance with ABF/CT Pattern "D" UT Procedure 001 Revision 1. All recordable Indications if found were recorded on a data sheet that Caltrans QA generates after performing a joint inspection. The members are identified as hold back weld between edge panel and deck panel (Cross beam side) OBG segment 8CE. The weld designations are as follows.

SEG048\*-044 (OBG 8CE-DP to E.P, Cross beam side)

ULTRASONIC INSPECTION

**OBG SEGMENT 9AE** 

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ABF Report No: UT-9E-031

This QA Inspector performed verification Ultrasonic Testing (UT) in accordance with ABF/CT Pattern "D" UT Procedure 001 Revision 1. All recordable Indications if found were recorded on a data sheet that Caltrans QA generates after performing a joint inspection. The members are identified as hold back weld between edge panel and deck panel (Cross beam side) OBG segment 9AE. The weld designations are as follows.

CA057-002 (OBG 9AE-DP to E.P, Cross beam side)

#### MAGNETIC PARTICLE INAPECTION

#### **OBG SEGMENT 7BE**

ABF Request No. 05272010-1

This QA Inspector Witnessed ABF personal performing Magnetic particle Testing (MT) on the weld between side panel and bottom panel (cross beam side). Weld identification number was.

SEG036A-011 (OBG 7BE-BP to SP, E4)

No relevant indications were observed.

#### **ULTRASONIC INSPECTION**

#### **OBG SEGMENT 7BE**

ABF Request No. 05272010-1

This QA Inspector performed verification Ultrasonic Testing (UT) in accordance with ABF/CT Pattern "D" UT Procedure 001 Revision 1. All recordable Indications if found were recorded on a data sheet that Caltrans QA generates after performing a joint inspection. The members are identified weld between side panel and bottom panel (Cross beam side) OBG segment 7BE. Inspection was carried out on repair areas. The weld designations are as follows.

SEG036A-011 (OBG 7BE-BP to SP, E4)

This QA Inspector randomly observed the following work in progress.

#### **OBG SEGMENT 8CW-9AW**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 037743 performing Shielded Metal Arc Welding process for weld 058 located on PCMK. BP042-001. ZPMC QC Mr. Liu Hua Jie monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2112-fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067656 performing Shielded Metal Arc Welding process for weld 60 located on PCMK. BP096-001. ZPMC QC Mr. Liu Hua Jie monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2112-fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 045227 performing Flux Cored Arc Welding process for weld 013 located on PCMK. SEG049A. ZPMC QC Mr. Liu Hua Jie monitoring this welding.

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The welding variables recorded by QC appeared to comply with the WPS-B-T-2232-Tc- u4b-f.

#### **OBG SEGMENT 8BW-8CW**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066028 performing Shielded Metal Arc Welding process for weld OBW8A-001 located on PCMK. Edge panel splice weld between OBG segment 8BW and 8CW (Counter weight side). ZPMC QC Mr. Zhu Yuan Yuan monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-3G (3F)-FCM-Repair-1. Weld repair report identified as B-WR13197.

#### **OBG SEGMENT 9AW-9BW**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066421 performing Flux Cored Arc Welding process for weld 004 located on PCMK. OBW9B. ZPMC QC Mr. Wang Zhu monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233T-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066239 performing Flux Cored Arc Welding process for weld 005 located on PCMK. OBW9B. ZPMC QC Mr. Wang Zhu monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233T-1.

#### **OBG SEGMENT 9AE**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 053609 performing Flux Cored Arc Welding process for weld 004 located on PCMK. 011. ZPMC QC Mr. Wang Li Yang monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233-Tc-u4b-f.

Unless otherwise noted, all work observed on this dated appeared to generally comply with applicable contract documents.





## **Summary of Conversations:**

No relevant conversations.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Utekar, Shrikant Quality Assurance Inspector **Reviewed By:** Dawson,Paul QA Reviewer